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Translation of the relevant paragraphs of DE 41 32 021 A1

Paragraph 1: The present invention relates to a plate for the osteosynthesis of fractured long bones, which is provided with a plurality of screws for anchoring it in the fragments to be joined together.

Paragraph 2: The ossification and strength of the fracture zone can be ascertained approximately by means of X-rays, as a result of which the load start setting (around 10 kilograms partial load from the sixth to eighth week) can be estimated, although an assessment of the fracture zone strength by means of X-rays is difficult and inaccurate even for the specialists.

Paragraph 3: In the example of embodiment shown in the figures, **18** denotes a distance sensor which cooperates with a transmitter **20** to transmit continuously or at very small time intervals, e.g. microseconds or milliseconds, any changes in distance or relative movements between the plate parts **4** and **6** both towards one another and away from one another via telemetry or infrared telemetry to an extracorporeal receiver. The transmitter **20** may be designed to be passive, e.g. by stimulation from outside, or active with an implanted power source.

Paragraph 4: The plate for osteosynthesis according to the invention with the telescopic mechanism and the associated sensors and transmitters is particularly suitable for use in connection with a stimulation plate which is fitted to the extremity and receives signals from a control unit which in turn is supplied with the output signals from the pressure sensor, distance sensor and extension measuring unit. Depending on the signals fed to it, the stimulation plate can then induce micro-movements in the lesion area, wherein the movements of the extremity are made possible by the telescopic mechanism according to the invention.

Paragraph 5: Around one week after the start of osteosynthesis, mechanical stimulation in the lesion area should start with the aid of the plate according to the

invention, according to which, when using for example a stimulation plate in a control loop together with a computer for the repair tissue which differs from the bone, an optimal biomechanical environment can be created at each time of fracture healing.